

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Original) A dielectric material for forming a structure of an integrated circuit, said dielectric material comprising a plurality of carbon nanostructures.
2. (Original) The dielectric material of claim 1 wherein said carbon nanostructures comprise a plurality of carbon nanotubes.
3. (Original) The dielectric material of claim 1 wherein said carbon nanostructures comprise a plurality of fluorinated carbon nanotubes.
4. (Original) The dielectric material of claim 1 wherein said dielectric material has a dielectric constant of less than about 3.
5. (Original) The dielectric material of claim 1 wherein said structure further comprises at least one conductive feature disposed in said dielectric material.
6. (Original) The dielectric material of claim 1 wherein said carbon nanostructures comprise a plurality of fluorinated carbon buckyballs.
7. (Original) The dielectric material of claim 1 further comprising a cap layer on said dielectric material.
8. (Original) The dielectric material of claim 7 wherein said carbon nanotubes and said cap layer have an effective dielectric constant of less than about 3.

9. (Original) The dielectric material of claim 1 further comprising:
a copolymer layer binding said carbon nanotubes to define the dielectric material.
10. (Original) The dielectric material of claim 7 wherein said carbon nanotubes and said copolymer layer have an effective dielectric constant of less than about 3.
11. (Original) A semiconductor structure formed on a substrate, comprising:
a dielectric layer comprising a plurality of carbon nanostructures; and
at least one conductive feature in said dielectric layer, said conductive feature electrically isolated from nearby conductive features by portions of said dielectric layer.
12. (Original) The semiconductor structure of claim 11 wherein said dielectric layer has an exposed surface, and further comprising:
a cap layer of an insulating material at least partially covering said exposed surface, said cap layer having a top surface, and said conductive feature having a top surface substantially coplanar with said top surface of said cap layer.
13. (Original) The semiconductor structure of claim 11 wherein said carbon nanostructures comprise a plurality of carbon nanotubes.
14. (Original) The semiconductor structure of claim 11 wherein said carbon nanostructures comprise a plurality of fluorinated carbon nanotubes.
15. (Original) The semiconductor structure of claim 11 wherein said dielectric layer has a dielectric constant of less than about 3.
16. (Original) The semiconductor structure of claim 11 wherein said structure comprises a plurality of conductors electrically isolated by said layer of said dielectric material.

17. (Original) The semiconductor structure of claim 11 wherein said carbon nanostructures comprise a plurality of fluorinated carbon buckyballs.
18. (Original) The semiconductor structure of claim 11 further comprising:
a cap layer disposed on said carbon nanostructures.
19. (Original) The semiconductor structure of claim 18 wherein said carbon nanostructures and said cap layer collectively have a dielectric constant of less than about 3.
20. (Original) The semiconductor structure of claim 11 further comprising:
a substrate selected from the group consisting of an interconnect level, a dielectric material, a buried barrier layer, a metallization line, and a semiconductor wafer.
21. (Original) An integrated circuit comprising a plurality of circuit elements and the semiconductor structure of claim 11, said conductive feature being electrically coupled with at least one of said circuit elements.
22. (Original) The dielectric material of claim 11 further comprising:
a copolymer layer binding said carbon nanotubes to define said dielectric layer.
23. (Original) The dielectric material of claim 22 wherein said carbon nanotubes and said copolymer layer have an effective dielectric constant of less than about 3.
- 24-45. (Cancelled)